8/16/1997D

GenCore version 4.5

OM protein - protein search, using sw model

Run on: June 8, 2001, 10:55:54 ; Search time 63.61 Seconds
(without alignments)
329.493 Million cell updates/sec

Title: US-09-397-548-14
Perfect score: 5748
Sequence: 1 MAAGCLLALTLTLFQSLLIG.....IIGIQFLLLWLVSGSTHRLL 1091

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 185757 seqs, 19210857 residues

Total number of hits satisfying chosen parameters: 185757

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
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5: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	5748	100.0	1091	1	US-07-745-206A-25	Sequence 25, Appl
2	5748	100.0	1091	1	US-08-455-543A-52	Sequence 52, Appl
3	5748	100.0	1091	2	US-08-223-305C-52	Sequence 52, Appl
4	5748	100.0	1091	2	US-08-311-363-25	Sequence 25, Appl
5	5744	99.9	1091	3	US-08-713-118-4	Sequence 4, Appli
6	5744	99.9	1091	4	US-09-452-007-4	Sequence 4, Appli
7	5708.5	99.3	1086	1	US-08-455-543A-54	Sequence 54, Appl
8	5708.5	99.3	1086	2	US-08-223-305C-54	Sequence 54, Appl
9	5691.5	99.0	1084	1	US-08-455-543A-56	Sequence 56, Appl
10	5691.5	99.0	1084	2	US-08-223-305C-56	Sequence 56, Appl
11	5672	98.7	1103	1	US-08-455-543A-53	Sequence 53, Appl
12	5672	98.7	1103	2	US-08-223-305C-53	Sequence 53, Appl
13	5652	98.3	1079	1	US-08-455-543A-55	Sequence 55, Appl
14	5652	98.3	1079	2	US-08-223-305C-55	Sequence 55, Appl
15	5508.5	95.8	1106	1	US-08-435-675B-5	Sequence 5, Appli
16	5490.5	95.5	1106	1	US-08-336-257A-8	Sequence 8, Appli
17	5257.5	91.5	1086	6	5386025-8	Patent No. 5386025
18	2581.5	44.9	508	1	US-08-435-675B-6	Sequence 6, Appli
19	182	3.2	885	3	US-09-074-579-5	Sequence 5, Appli
20	159.5	2.8	946	3	US-09-074-579-3	Sequence 3, Appli
21	154	2.7	903	1	US-08-021-601-12	Sequence 12, Appl
22	154	2.7	903	1	US-08-082-849B-12	Sequence 12, Appl
23	154	2.7	903	5	PCT-US94-01624-12	Sequence 12, Appl
24	152.5	2.7	789	1	US-08-471-033-32	Sequence 32, Appl
25	152.5	2.7	789	2	US-08-471-044-32	Sequence 32, Appl
26	152.5	2.7	789	2	US-08-463-483A-32	Sequence 32, Appl
27	152.5	2.7	789	2	US-08-471-046A-32	Sequence 32, Appl
28	152.5	2.7	789	2	US-08-470-566B-32	Sequence 32, Appl
29	152.5	2.7	789	2	US-08-838-219B-4	Sequence 4, Appli
30	152.5	2.7	789	2	US-08-469-334-32	Sequence 32, Appl
31	152.5	2.7	789	3	US-09-300-529-32	Sequence 32, Appl
32	152.5	2.7	789	3	US-09-233-336A-4	Sequence 4, Appli
33	152.5	2.7	789	4	US-09-233-752A-4	Sequence 4, Appli
34	150.5	2.6	789	4	US-08-960-780-6	Sequence 6, Appli
35	148.5	2.6	790	4	US-08-960-780-4	Sequence 4, Appli
36	147.5	2.6	746	2	US-08-838-219B-6	Sequence 6, Appli
37	147.5	2.6	746	3	US-09-233-336A-6	Sequence 6, Appli
38	147.5	2.6	746	4	US-09-233-752A-6	Sequence 6, Appli
39	145.5	2.5	790	4	US-08-960-780-8	Sequence 8, Appli
40	141.5	2.5	789	1	US-08-471-033-29	Sequence 29, Appl
41	141.5	2.5	789	2	US-08-471-044-29	Sequence 29, Appl
42	141.5	2.5	789	2	US-08-463-483A-29	Sequence 29, Appl
43	141.5	2.5	789	2	US-08-471-046A-29	Sequence 29, Appl
44	141.5	2.5	789	2	US-08-470-566B-29	Sequence 29, Appl
45	141.5	2.5	789	2	US-08-838-219B-2	Sequence 2, Appli

ALIGNMENTS

RESULT 1
US-07-745-206A-25
; Sequence 25, Application US/07745206A
; Patent No. 5429921
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: McCue, Ann
; APPLICANT: Feldman, Daniel
; TITLE OF INVENTION: Human Calcium Channel Compositions and
; TITLE OF INVENTION: Methods
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fitch, Even, Tabin & Flannery
; STREET: 135 S. LaSalle
; CITY: Chicago
; STATE: Illinois
; COUNTRY: U.S.A.
; ZIP: 60603
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/745,206A
; FILING DATE: 19910815
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Feder, Scott B
; REFERENCE/DOCKET NUMBER: 51504
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312-372-7842
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1091 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-745-206A-25

8/15/91

Query Match 100.0%; Score 5748; DB 1; Length 1091;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1091; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

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Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

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Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

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Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
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Db     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

Qy    1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080
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Db    1081 WLVSGSTHRLL 1091
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RESULT   2
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; Sequence 52, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-52


  Query Match           100.0%;  Score 5748;  DB 1;  Length 1091;
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 Matches 1091;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

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Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080
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Db    1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080

Qy    1081 WLVSGSTHRLL 1091
           ||||||||||| 
Db    1081 WLVSGSTHRLL 1091


RESULT   3
US-08-223-305C-52
; Sequence 52, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-52
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  Query Match           100.0%;  Score 5748;  DB 2;  Length 1091;
  Best Local Similarity  100.0%;  Pred. No. 0;
  Matches 1091;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

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Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Qy    1081 WLVSGSTHRLL 1091
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; Sequence 25, Application US/08311363
; Patent No. 5876958
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,363
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-51506
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  25:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-311-363-25
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  Query Match           100.0%;  Score 5748;  DB 2;  Length 1091;
  Best Local Similarity  100.0%;  Pred. No. 0;
  Matches 1091;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db   1081 WLVSGSTHRLL 1091


RESULT   5
US-08-713-118-4
; Sequence 4, Application US/08713118
; Patent No. 6040436
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-713-118-4


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Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080
Db   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080

Qy   1081 WLVSGSTHRLL 1091
Db   1081 WLVSGSTHRLL 1091
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US-09-452-007-4
; Sequence 4, Application US/09452007
; Patent No. 6140485
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/452,007
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-452-007-4
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Query Match 99.9%; Score 5744; DB 4; Length 1091;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1090; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYALLHPNLQPKNPKSQEPVTL 540

Qy    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
Db    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
Db    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
Db    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
Db    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

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Db   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080

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Db   1081 WLVSGSTHRLL 1091
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; Sequence 54, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  54:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1086 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-54
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  Matches 1086;  Conservative    0;  Mismatches    0;  Indels    5;  Gaps    1;

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Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

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Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Qy    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db    656 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 715

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Db    716 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 775

Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db    776 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 835

Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db    836 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 895

Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db    896 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 955

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
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Db    956 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1015

Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080
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Db   1016 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1075

Qy   1081 WLVSGSTHRLL 1091
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Db   1076 WLVSGSTHRLL 1086


RESULT   8
US-08-223-305C-54
; Sequence 54, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  54:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1086 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-54


  Query Match             99.3%;  Score 5708.5;  DB 2;  Length 1086;
  Best Local Similarity   99.5%;  Pred. No. 0;
  Matches 1086;  Conservative    0;  Mismatches    0;  Indels    5;  Gaps    1;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

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Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db    896 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 955

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    956 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1015

Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db.  1016 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1075

Qy   1081 WLVSGSTHRLL 1091
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Db   1076 WLVSGSTHRLL 1086
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RESULT   9
US-08-455-543A-56
; Sequence 56, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  56:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1084 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-56
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  Query Match             99.0%;  Score 5691.5;  DB 1;  Length 1084;
  Best Local Similarity   99.3%;  Pred. No. 0;
  Matches 1083;  Conservative    0;  Mismatches    1;  Indels    7;  Gaps    1;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
Db    601 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 653

Qy    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
Db    654 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 713

Qy    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
Db    714 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 773

Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
Db    774 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 833

Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
Db    834 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 893

Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
Db    894 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 953

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
Db    954 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1013

Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080
Db   1014 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1073

Qy   1081 WLVSGSTHRLL 1091
Db   1074 WLVSGSTHRLL 1084


RESULT 10
US-08-223-305C-56
; Sequence 56, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  56:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1084 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-56


  Query Match             99.0%;  Score 5691.5;  DB 2;  Length 1084;
  Best Local Similarity   99.3%;  Pred. No. 0;
  Matches 1083;  Conservative    0;  Mismatches    1;  Indels    7;  Gaps    1;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

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Db    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db    601 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 653

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Db    654 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 713

Qy    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    714 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 773

Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    774 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 833

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Db    834 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 893

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Db    894 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 953

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
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Db    954 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1013

Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080
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Db   1014 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1073

Qy   1081 WLVSGSTHRLL 1091
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Db   1074 WLVSGSTHRLL 1084
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RESULT  11
US-08-455-543A-53
; Sequence 53, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1103 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-53
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  Query Match             98.7%;  Score 5672;  DB 1;  Length 1103;
  Best Local Similarity   97.6%;  Pred. No. 0;
  Matches 1083;  Conservative    0;  Mismatches    1;  Indels   26;  Gaps    2;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK---------- 530
          ||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKPIGVGIPTIN 540

Qy    531 ---------NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 581
                  ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 LRKRRPNIQNPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 600

Qy    582 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNF 641
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNF 653

Qy    642 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 701
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    654 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 713

Qy    702 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 761
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    714 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 773

Qy    762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 821
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 833

Qy    822 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 881
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Db    834 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 893

Qy    882 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 941
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Db    894 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 953

Qy    942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1001
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1013

Qy   1002 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGG 1061
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1014 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGG 1073

Qy   1062 VSGLNPSLWYIIGIQFLLLWLVSGSTHRLL 1091
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Db   1074 VSGLNPSLWYIIGIQFLLLWLVSGSTHRLL 1103
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RESULT  12
US-08-223-305C-53
; Sequence 53, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1103 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-53
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  Query Match           98.7%;  Score 5672;  DB 2;  Length 1103;
  Best Local Similarity  97.6%;  Pred. No. 0;
  Matches 1083;  Conservative    0;  Mismatches    1;  Indels   26;  Gaps    2;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK---------- 530
           ||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKPIGVGIPTIN 540

Qy     531 ---------NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 581
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Db     541 LRKRRPNIQNPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 600

Qy     582 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNF 641
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNF 653

Qy     642 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 701
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     654 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 713

Qy     702 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 761
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     714 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 773

Qy     762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 821
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 833

Qy     822 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 881
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Db     834 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 893

Qy     882 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 941
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Db     894 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 953

Qy     942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1001
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Db     954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1013

Qy    1002 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGG 1061
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1014 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGG 1073

Qy    1062 VSGLNPSLWYIIGIQFLLLWLVSGSTHRLL 1091
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Db    1074 VSGLNPSLWYIIGIQFLLLWLVSGSTHRLL 1103


RESULT 13
US-08-455-543A-55
; Sequence 55, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  55:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1079 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-55


  Query Match             98.3%;  Score 5652;  DB 1;  Length 1079;
  Best Local Similarity   98.8%;  Pred. No. 0;
  Matches 1078;  Conservative    0;  Mismatches    1;  Indels   12;  Gaps    2;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK-----EPVTL 535

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     536 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 595

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     596 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 648

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     649 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 708

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     709 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 768

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     769 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 828

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     829 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 888

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     889 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 948

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     949 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1008

Qy    1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1009 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1068

Qy    1081 WLVSGSTHRLL 1091
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Db    1069 WLVSGSTHRLL 1079
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RESULT 14
US-08-223-305C-55
; Sequence 55, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  55:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1079 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-55
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  Best Local Similarity  98.8%;  Pred. No. 0;
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Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||     |||||
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Qy    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Qy    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
          ||||||||||||||||||||||        ||||||||||||||||||||||||||||||
Db    596 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 648

Qy    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    649 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 708

Qy    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db    709 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 768

Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
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Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVSGLNPSLWYIIGIQFLLL 1080
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RESULT 15
US-08-435-675B-5
; Sequence 5, Application US/08435675B
; Patent No. 5710250
;  GENERAL INFORMATION:
;    APPLICANT:  Ellis, Steven Bradley
;    APPLICANT:  Williams, Mark E.
;    APPLICANT:  Harpold, Michael Miller
;    APPLICANT:  Schwartz, Arnold
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  CALCIUM CHANNEL COMPOSITIONS AND METHODS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/435,675B
;      FILING DATE:  05-MAY-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/314,083
;      FILING DATE:  28-SEP-1994
;      APPLICATION NUMBER:  US 07/914,231
;      FILING DATE:  13-JUL-1992
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  08-NOV-1990
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-53193
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-238-0999
;      TELEFAX:  619-238-0062
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  5:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1106 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-435-675B-5


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Qy    119 SNEVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTI 178
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Qy    179 VLNELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDV 238
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Qy     531 -----------NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDER 579
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Qy     580 YIDKGNRTYTWTPVNGTDY-SLALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKP 638
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Db     601 YIDKGNRTYTWTPVNGTDYSSLALVLPTYSFYYIKAKIEETITQARY-------SETLKP 653

Qy     639 DNFEESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAG 698
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Db     654 DNFEESGYTFLAPRDYCSDLKPSDNNTEFLLNFNEFIDRKTPNNPSCNTDLINRVLLDAG 713

Qy     699 FTNELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDN 758
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Qy     759 DNYVFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSI 818
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           ||||||||||||||||||||||||||||||:||||||||||||||||||||||||||||||
Db     894 VYAFNKSYDYQSVCEPGAAPKQGAGHRSAYVPSIADILQIGWWATAAAWSILQQFLLSLT 953

Qy     939 FPRLLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMN 998
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Db     954 FPRLLEAADMEDDDFTASMSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHVEKLMN 1013

Qy     999 TNLIFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTD 1058
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Search completed: June 8, 2001, 19:37:35
Job time: 31301 sec

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Date: Jun 8, 2001  7:49 PM

About: Results were produced by the GenCore software, version 4.5,
       Copyright (c) 1993-2000 Compugen Ltd.

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; Sequence 24, Application US/07745206A
; Patent No. 5429921
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Feldman, Daniel
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fitch, Even, Tabin & Flannery
;      STREET:  135 S. LaSalle
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  U.S.A.
;      ZIP:  60603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/745,206A
;      FILING DATE:  19910815
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Feder, Scott B
;      REFERENCE/DOCKET NUMBER:  51504
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-372-7842
;  INFORMATION FOR SEQ ID NO:  24:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3566 base pairs
;      TYPE:  NUCLEIC ACID
;      STRANDEDNESS:  unknown
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..3273
US-07-745-206A-24


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            Quality: 5748.00              Length:   1091
              Ratio: 5.269                  Gaps:      0
 Percent Similarity: 100.000   Percent Identity: 100.000

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; Sequence 24, Application US/08311363
; Patent No. 5876958
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,363
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-51506
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;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  24:
;    SEQUENCE CHARACTERISTICS:
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;      TOPOLOGY:  unknown
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US-08-311-363-24


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; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  11:
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; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  33:
;    SEQUENCE CHARACTERISTICS:
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US-08-455-543A-33


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;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  29
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BROWN, MARTIN, HALLER & McCLAIN
;      STREET:  1660 UNION STREET
;      CITY:  SAN DIEGO
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92101
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;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/193,078B
;      FILING DATE:  07-FEB-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/868,354
;      FILING DATE:  10-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-53607
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-238-0999
;      TELEFAX:  619-238-0062
;  INFORMATION FOR SEQ ID NO:  11:
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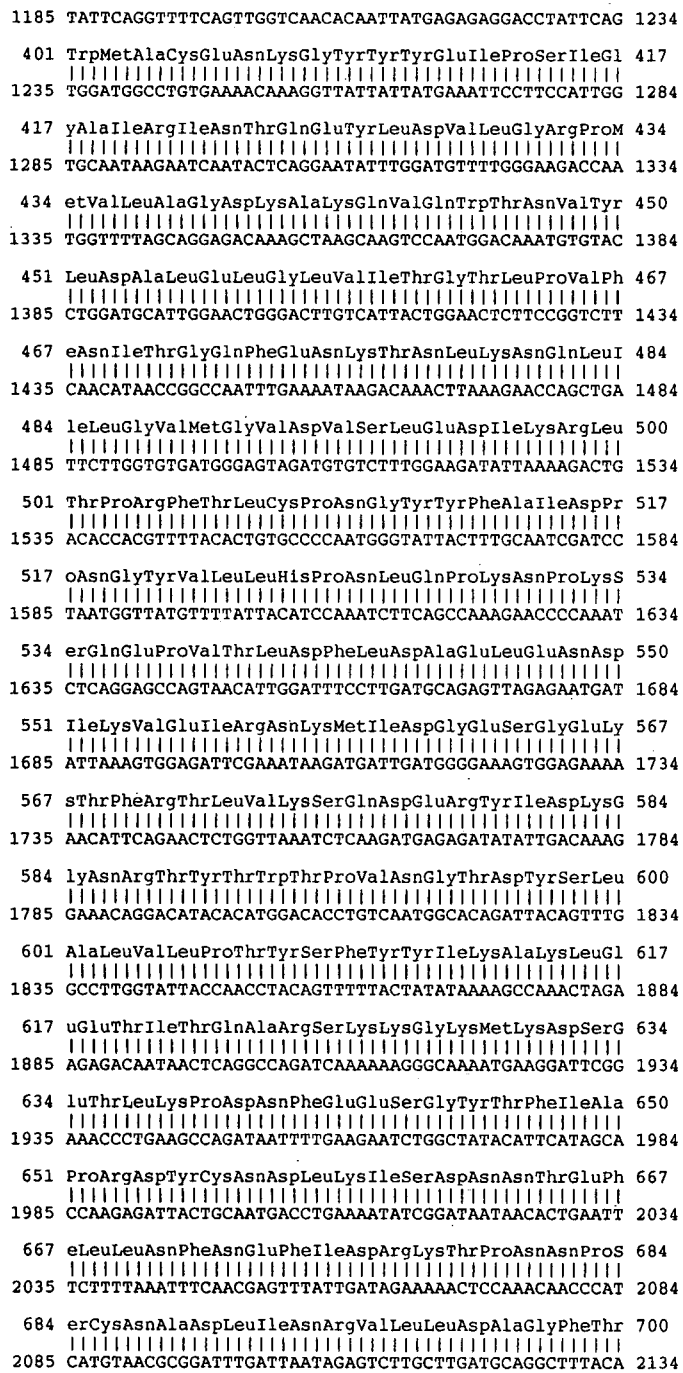
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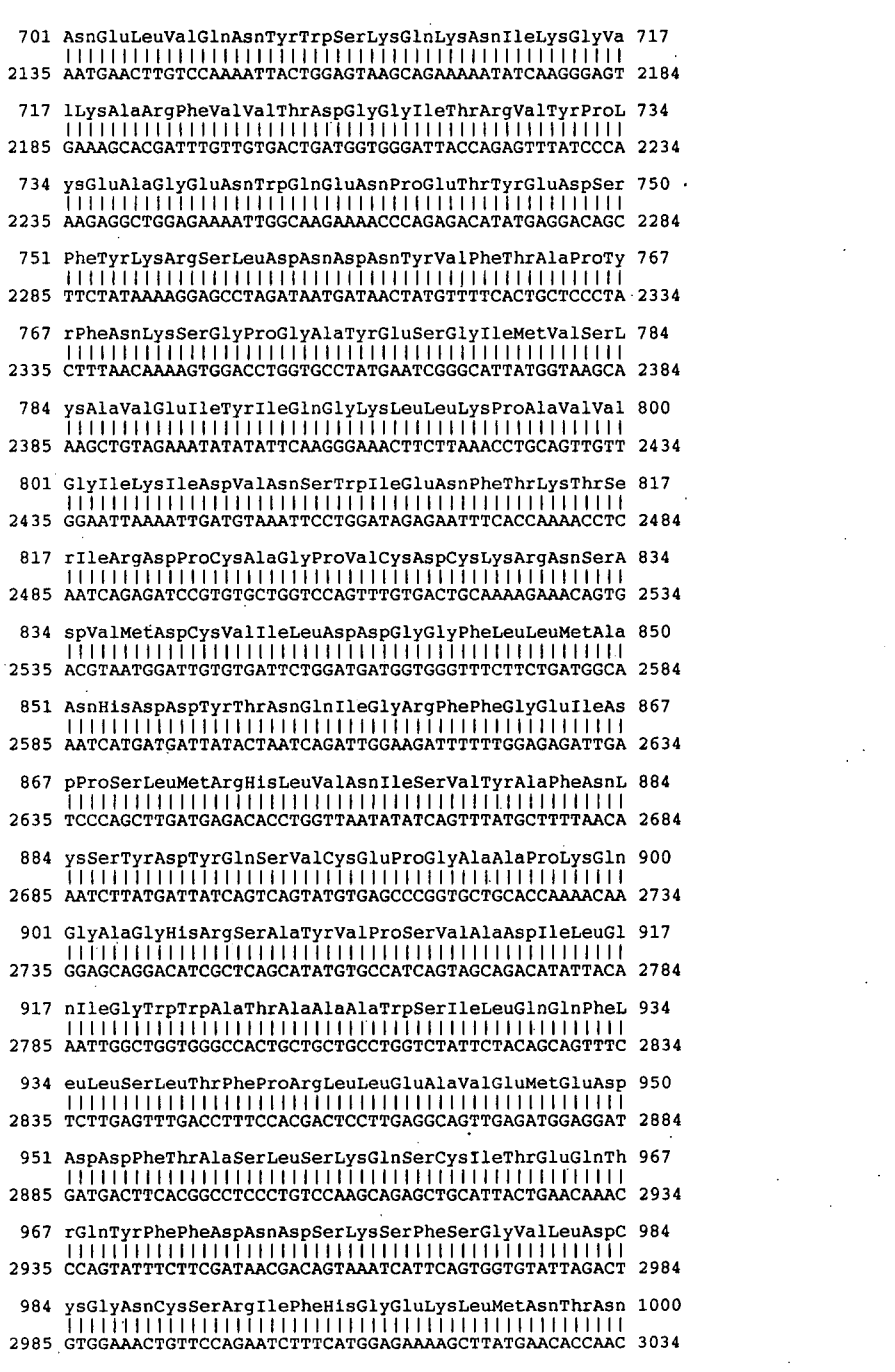
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; Sequence 11, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
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;      APPLICATION NUMBER:  US 07/482,384
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;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
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US-08-223-305C-11


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;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
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;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  33:
;    SEQUENCE CHARACTERISTICS:
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;      TYPE:  nucleic acid
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;       OTHER INFORMATION:  /standard_name= "Alpha-2b"
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US-08-223-305C-33


alignment_scores:
            Quality: 5748.00              Length:   1091
              Ratio:  5.269                 Gaps:      0
 Percent Similarity: 100.000   Percent Identity: 100.000

alignment_block:
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;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  40
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
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;      FILING DATE:  05-NOV-1993
;      CLASSIFICATION:  435
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;      APPLICATION NUMBER:  08/105,536
;      FILING DATE:  11-AUG-1993
;    PRIOR APPLICATION DATA:
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;      FILING DATE:  14-AUG-1992
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;      FILING DATE:  13-JUL-1992
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;      APPLICATION NUMBER:  US 07/868,354
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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
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;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
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;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-55038
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
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US-08-149-097D-11


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              Ratio:  5.269                 Gaps:      0
 Percent Similarity: 100.000   Percent Identity: 100.000

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; Sequence 11, Application US/08949386
; Patent No. 6090623

;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Gillespie, Alison
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  38
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  92101
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
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;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/290,012
;      FILING DATE:  11-AUG-1994
;      APPLICATION NUMBER:  08/149,097
;      FILING DATE:  5-NOV-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/105,536
;      FILING DATE:  11-AUG-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  519808
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
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US-08-949-386-11


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seq_documentation_block:
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; Patent No. 6096514
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Gillespie, Alison
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  38
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  92101
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/450,562
;      FILING DATE:
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;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/404,950
;      FILING DATE:  13-MAR-1995
;      APPLICATION NUMBER:  08/336,257
;      FILING DATE:  7-NOV-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/314,083
;      FILING DATE:  28-SEPT-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/311,363
;      FILING DATE:  23-SEPT-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/290,012
;      FILING DATE:  11-AUG-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  4-APR-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/193,078
;      FILING DATE:  07-FEB-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/149,097
;      FILING DATE:  5-NOV-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/105,536
;      FILING DATE:  11-AUG-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/914,231
;      FILING DATE:  13-JULY-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  10-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US92/06903
;      FILING DATE:  14-AUG-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/603,751
;      FILING DATE:  08-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/482,384
;      FILING DATE:  02-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-519812
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
;      TYPE:  nucleic acid
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US-08-450-562-11


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; Patent No. 6040436
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3298 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
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US-08-713-118-3


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; Sequence 3, Application US/09452007
; Patent No. 6140485
; GENERAL INFORMATION:
; APPLICANT: Franco, Rodrigo
; APPLICANT: Sun Chen, Ai Ru
; APPLICANT: Suey, David J.
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL
; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: MA
; COUNTRY: USA
; ZIP: 02173-4799
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/452,007
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/713,118
; FILING DATE: 16-SEP-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Mata, Elizabeth W.
; REGISTRATION NUMBER: 38,236
; REFERENCE/DOCKET NUMBER: ACC96-01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-861-6240
; TELEFAX: 617-861-9540
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3298 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 20..3292
US-09-452-007-3

alignment_scores:
Quality: 5744.00 Length: 1091

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            Ratio:  5.265                Gaps:      0
 Percent Similarity: 100.000   Percent Identity: 99.908

alignment_block:
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3220 CTCCCTGTGGTATATCATTGGAATCCAGTTTCTACTACTTTGGCTGGTAT 3269

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seq_documentation_block:
; Sequence 20, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
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;       COUNTRY:  USA
;       ZIP:  92101-2926
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  DOS
;       SOFTWARE:  FastSEQ Version 1.5
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/455,543A
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/223,305
;       FILING DATE:  April 4, 1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/868,354
;       FILING DATE:  April 10, 1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/745,206
;       FILING DATE:  15-AUG-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/620,250
;       FILING DATE:  30-NOV-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/482,384
;       FILING DATE:  20-FEB-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/603,751
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US89/01408
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/176,899
;       FILING DATE:  04-APR-1988
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  6362-52517
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  20:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  3657 base pairs
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;     ORIGINAL SOURCE:
;     FEATURE:
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; Sequence 20, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  20:
;    SEQUENCE CHARACTERISTICS:
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; Sequence 34, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
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;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  34:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3585 base pairs
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US-08-455-543A-34


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 584 lyAsnArgThrTyrThrTrpThrProValAsnGlyThrAspTyrSerLeu 600
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 601 AlaLeuValLeuProThrTyrSerPheTyrTyrIleLysAlaLysLeuGl 617
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1820 GCCTTGGTATTACCAACCTACAGTTTTTACTATATAAAAGCCAAACTAGA 1869

 617 uGluThrIleThrGlnAlaArgSerLysLysGlyLysMetLysAspSerG 634
     ||||||||||||||||||||||||||||||||||||||||||||||||||
1870 AGAGACAATAACTCAGGCCAGATCAAAAAAGGGCAAAATGAAGGATTCGG 1919

 634 luThrLeuLysProAspAsnPheGluGluSerGlyTyrThrPheIleAla 650
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 651 ProArgAspTyrCysAsnAspLeuLysIleSerAspAsnAsnThrGluPh 667
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1970 CCAAGAGATTACTGCAATGACCTGAAAATATCGGATAATAACACTGAATT 2019

 667 eLeuLeuAsnPheAsnGluPheIleAspArgLysThrProAsnAsnProS 684
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2020 TCTTTTAAATTTCAACGAGTTTATTGATAGAAAAACTCCAAACAACCCAT 2069

 684 erCysAsnAlaAspLeuIleAsnArgValLeuLeuAspAlaGlyPheThr 700
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 701 AsnGluLeuValGlnAsnTyrTrpSerLysGlnLysAsnIleLysGlyVa 717
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 717 lLysAlaArgPheValValThrAspGlyGlyIleThrArgValTyrProL 734
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2170 GAAAGCACGATTTGTTGTGACTGATGGTGGGATTACCAGAGTTTATCCCA 2219

 734 ysGluAlaGlyGluAsnTrpGlnGluAsnProGluThrTyrGluAspSer 750
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 751 PheTyrLysArgSerLeuAspAsnAspAsnTyrValPheThrAlaProTy 767
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1017 gLeuLeuIleGlnAlaGluGlnThrSerAspGlyProAsnProCysAspM 1034
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1051 AsnValLeuGluAspTyrThrAspCysGlyGlyValSerGlyLeuAsnPr 1067
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1067 oSerLeuTrpTyrIleIleGlyIleGlnPheLeuLeuLeuTrpLeuValS 1084
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1084 erGlySerThrHisArgLeuLeu 1091
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3270 CTGGCAGCACACACCGGCTGTTA 3292
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GenCore version 4.5

OM protein - protein search, using sw model

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307.446 Million cell updates/sec

Title: US-09-397-548-15
Perfect score: 5346
Sequence: 1 MAAGCLLALTLTLFQSLLIG.....TNLIFIMVESKGTCPCDTRL 1018

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 185757 seqs, 19210857 residues

Total number of hits satisfying chosen parameters: 185757

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	5346	100.0	1091	1	US-07-745-206A-25	Sequence 25, Appl
2	5346	100.0	1091	1	US-08-455-543A-52	Sequence 52, Appl
3	5346	100.0	1091	2	US-08-223-305C-52	Sequence 52, Appl
4	5346	100.0	1091	2	US-08-311-363-25	Sequence 25, Appl
5	5342	99.9	1091	3	US-08-713-118-4	Sequence 4, Appli
6	5342	99.9	1091	4	US-09-452-007-4	Sequence 4, Appli
7	5306.5	99.3	1086	1	US-08-455-543A-54	Sequence 54, Appl
8	5306.5	99.3	1086	2	US-08-223-305C-54	Sequence 54, Appl
9	5289.5	98.9	1084	1	US-08-455-543A-56	Sequence 56, Appl
10	5289.5	98.9	1084	2	US-08-223-305C-56	Sequence 56, Appl
11	5270	98.6	1103	1	US-08-455-543A-53	Sequence 53, Appl
12	5270	98.6	1103	2	US-08-223-305C-53	Sequence 53, Appl
13	5250	98.2	1079	1	US-08-455-543A-55	Sequence 55, Appl
14	5250	98.2	1079	2	US-08-223-305C-55	Sequence 55, Appl
15	5137.5	96.1	1106	1	US-08-435-675B-5	Sequence 5, Appli
16	5119.5	95.8	1106	1	US-08-336-257A-8	Sequence 8, Appli
17	4913	91.9	1086	6	5386025-8	Patent No. 5386025
18	2581.5	48.3	508	1	US-08-435-675B-6	Sequence 6, Appli
19	182	3.4	885	3	US-09-074-579-5	Sequence 5, Appli
20	159.5	3.0	946	3	US-09-074-579-3	Sequence 3, Appli
21	154	2.9	903	1	US-08-021-601-12	Sequence 12, Appl
22	154	2.9	903	1	US-08-082-849B-12	Sequence 12, Appl
23	154	2.9	903	5	PCT-US94-01624-12	Sequence 12, Appl
24	152.5	2.9	789	1	US-08-471-033-32	Sequence 32, Appl
25	152.5	2.9	789	2	US-08-471-044-32	Sequence 32, Appl
26	152.5	2.9	789	2	US-08-463-483A-32	Sequence 32, Appl
27	152.5	2.9	789	2	US-08-471-046A-32	Sequence 32, Appl
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33	152.5	2.9	789	4	US-09-233-752A-4	Sequence 4, Appli
34	150.5	2.8	789	4	US-08-960-780-6	Sequence 6, Appli
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40	141.5	2.6	789	1	US-08-471-033-29	Sequence 29, Appl
41	141.5	2.6	789	2	US-08-471-044-29	Sequence 29, Appl
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43	141.5	2.6	789	2	US-08-471-046A-29	Sequence 29, Appl
44	141.5	2.6	789	2	US-08-470-566B-29	Sequence 29, Appl
45	141.5	2.6	789	2	US-08-838-219B-2	Sequence 2, Appli

ALIGNMENTS

```
RESULT   1
US-07-745-206A-25
; Sequence 25, Application US/07745206A
; Patent No. 5429921
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Feldman, Daniel
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fitch, Even, Tabin & Flannery
;      STREET:  135 S. LaSalle
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  U.S.A.
;      ZIP:  60603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/745,206A
;      FILING DATE:  19910815
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Feder, Scott B
;      REFERENCE/DOCKET NUMBER:  51504
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-372-7842
;  INFORMATION FOR SEQ ID NO:  25:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  AMINO ACID
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-07-745-206A-25

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  Best Local Similarity 100.0%;  Pred. No. 0;
  Matches 1018;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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RESULT   2
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; Sequence 52, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
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;      SOFTWARE:  FastSEQ Version 1.5
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;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-52


  Query Match             100.0%;  Score 5346;  DB 1;  Length 1091;
  Best Local Similarity   100.0%;  Pred. No. 0;
  Matches 1018;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018


RESULT   3
US-08-223-305C-52
; Sequence 52, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-52


  Query Match           100.0%;  Score 5346;  DB 2;  Length 1091;
  Best Local Similarity  100.0%;  Pred. No. 0;
  Matches 1018;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018


RESULT   4
US-08-311-363-25
; Sequence 25, Application US/08311363
; Patent No. 5876958
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,363
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-51506
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  25:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-311-363-25


  Query Match           100.0%;  Score 5346;  DB 2;  Length 1091;
  Best Local Similarity  100.0%;  Pred. No. 0;
  Matches 1018;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
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Db     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
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RESULT   5
US-08-713-118-4
; Sequence 4, Application US/08713118
; Patent No. 6040436
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-713-118-4


  Query Match           99.9%;  Score 5342;  DB 3;  Length 1091;
  Best Local Similarity  99.9%;  Pred. No. 0;
  Matches 1017;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
           |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYALLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
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RESULT   6
US-09-452-007-4
; Sequence 4, Application US/09452007
; Patent No. 6140485
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/452,007
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-452-007-4


  Query Match           99.9%;  Score 5342;  DB 4;  Length 1091;
  Best Local Similarity   99.9%;  Pred. No. 0;
  Matches 1017;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYALLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
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Db     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018


RESULT   7
US-08-455-543A-54
; Sequence 54, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
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;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  DOS
;       SOFTWARE:  FastSEQ Version 1.5
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/455,543A
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/223,305
;       FILING DATE:  April 4, 1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/868,354
;       FILING DATE:  April 10, 1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/745,206
;       FILING DATE:  15-AUG-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/620,250
;       FILING DATE:  30-NOV-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/482,384
;       FILING DATE:  20-FEB-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/603,751
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US89/01408
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/176,899
;       FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  6362-52517
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  54:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  1086 amino acids
;       TYPE:  amino acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
;     FRAGMENT TYPE:  internal
US-08-455-543A-54


  Query Match             99.3%;  Score 5306.5;  DB 1;  Length 1086;
  Best Local Similarity   99.5%;  Pred. No. 0;
  Matches 1013;  Conservative    0;  Mismatches    0;  Indels    5;  Gaps    1;

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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK-----EPVTL 535

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     536 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 595

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     596 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 655

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     656 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 715

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Db     716 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 775

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     776 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 835

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Db     836 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 895

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     956 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1013


RESULT   8
US-08-223-305C-54
; Sequence 54, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
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;       SOFTWARE:  FastSEQ Version 1.5
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/223,305C
;       FILING DATE:  April 4, 1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/868,354
;       FILING DATE:  April 10, 1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/745,206
;       FILING DATE:  15-AUG-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/620,250
;       FILING DATE:  30-NOV-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/482,384
;       FILING DATE:  20-FEB-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/603,751
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US89/01408
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/176,899
;       FILING DATE:  04-APR-1988
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  52516  (P519739)
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  54:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  1086 amino acids
;       TYPE:  amino acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
;     FRAGMENT TYPE:  internal
US-08-223-305C-54


  Query Match             99.3%;  Score 5306.5;  DB 2;  Length 1086;
  Best Local Similarity   99.5%;  Pred. No. 0;
  Matches 1013;  Conservative    0;  Mismatches    0;  Indels    5;  Gaps    1;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK-----EPVTL 535

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     536 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 595

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     596 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 655

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     656 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 715

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db     716 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 775

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     776 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 835

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     836 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 895

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     896 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 955

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
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Db     956 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1013


RESULT   9
US-08-455-543A-56
; Sequence 56, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
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;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  56:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1084 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-56


  Query Match             98.9%;  Score 5289.5;  DB 1;  Length 1084;
  Best Local Similarity   99.2%;  Pred. No. 0;
  Matches 1010;  Conservative    0;  Mismatches    1;  Indels    7;  Gaps    1;

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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

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Db     601 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 653

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Db     654 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 713

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Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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RESULT  10
US-08-223-305C-56
; Sequence 56, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  56:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1084 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-56


  Query Match             98.9%;  Score 5289.5;  DB 2;  Length 1084;
  Best Local Similarity   99.2%;  Pred. No. 0;
  Matches 1010;  Conservative    0;  Mismatches    1;  Indels    7;  Gaps    1;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     714 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 773

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     774 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 833

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     834 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 893

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     894 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 953

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     954 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1011


RESULT  11
US-08-455-543A-53
; Sequence 53, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
```

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;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1103 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-53


  Query Match            98.6%;  Score 5270;  DB 1;  Length 1103;
  Best Local Similarity  97.4%;  Pred. No. 0;
  Matches 1010;  Conservative    0;  Mismatches    1;  Indels   26;  Gaps    2;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK---------- 530
           ||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKPIGVGIPTIN 540

Qy     531 ---------NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 581
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Db     541 LRKRRPNIQNPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 600

Qy     582 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNF 641
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNF 653

Qy     642 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 701
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     654 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 713

Qy     702 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 761
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     714 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 773

Qy     762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 821
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 833

Qy     822 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 881
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     834 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 893

Qy     882 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 941
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     894 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 953

Qy     942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1001
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1013

Qy    1002 IFIMVESKGTCPCDTRL 1018
           |||||||||||||||||
Db    1014 IFIMVESKGTCPCDTRL 1030


RESULT  12
US-08-223-305C-53
; Sequence 53, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1103 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-53


  Query Match             98.6%;  Score 5270;  DB 2;  Length 1103;
  Best Local Similarity   97.4%;  Pred. No. 0;
  Matches 1010;  Conservative    0;  Mismatches    1;  Indels   26;  Gaps    2;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK---------- 530
           ||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKPIGVGIPTIN 540

Qy     531 ---------NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 581
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 LRKRRPNIQNPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 600

Qy     582 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNF 641
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Db     601 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNF 653

Qy     642 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 701
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Db     654 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 713

Qy     702 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 761
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Db     714 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 773

Qy     762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 821
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Db     774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 833

Qy     822 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 881
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Db     834 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 893

Qy     882 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 941
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Db     894 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 953

Qy     942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1001
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1013

Qy    1002 IFIMVESKGTCPCDTRL 1018
           |||||||||||||||||
Db    1014 IFIMVESKGTCPCDTRL 1030


RESULT  13
US-08-455-543A-55
; Sequence 55, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
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;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  55:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1079 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-55


  Query Match             98.2%;  Score 5250;  DB 1;  Length 1079;
  Best Local Similarity   98.7%;  Pred. No. 0;
  Matches 1005;  Conservative    0;  Mismatches    1;  Indels   12;  Gaps    2;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
           ||||||||||||||||||||||||||||||||||||||||||||||||     |||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK-----EPVTL 535

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     536 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 595

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
           |||||||||||||||||||||||        ||||||||||||||||||||||||||||||
Db     596 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 648

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     649 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 708

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     709 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 768

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     769 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 828

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     829 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 888

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     889 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 948

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     949 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1006


RESULT  14
US-08-223-305C-55
; Sequence 55, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  55:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1079 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-55


  Query Match             98.2%;  Score 5250;  DB 2;  Length 1079;
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  Matches 1005;  Conservative    0;  Mismatches    1;  Indels   12;  Gaps    2;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK-----EPVTL 535

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     536 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 595

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     596 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 648

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     649 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 708

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db     709 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 768

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     769 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 828

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     829 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 888

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     889 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 948

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018
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Db     949 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRL 1006


RESULT  15
US-08-435-675B-5
; Sequence 5, Application US/08435675B
; Patent No. 5710250
;  GENERAL INFORMATION:
;    APPLICANT:  Ellis, Steven Bradley
;    APPLICANT:  Williams, Mark E.
;    APPLICANT:  Harpold, Michael Miller
;    APPLICANT:  Schwartz, Arnold
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  CALCIUM CHANNEL COMPOSITIONS AND METHODS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/435,675B
;      FILING DATE:  05-MAY-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/314,083
;      FILING DATE:  28-SEP-1994
;      APPLICATION NUMBER:  US 07/914,231
;      FILING DATE:  13-JUL-1992
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  08-NOV-1990
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-53193
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-238-0999
;      TELEFAX:  619-238-0062
;      TELEX:
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;  INFORMATION FOR SEQ ID NO:  5:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1106 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-435-675B-5

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  Best Local Similarity  94.8%;  Pred. No. 0;
  Matches  986;  Conservative   13;  Mismatches   12;  Indels   29;  Gaps    4;

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Qy     239 RRRPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNA 298
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Db     301 QDVSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKII 360

Qy     359 MLFTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGA 418
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Db     361 MLFTDGGEERAQEIFAKYNKDKKVRVFTFSVGQHNYDRGPIQWMACENKGYYYEIPSIGA 420

Qy     419 IRINTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTN 478
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Qy     819 RDPCAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNIS 878
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Date: Jun 8, 2001  7:52 PM

About: Results were produced by the GenCore software, version 4.5,
       Copyright (c) 1993-2000 Compugen Ltd.

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 -TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR_SCORE=pct
 -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pfs
 -NORM=ext -MINLEN=0 -MAXLEN=2000000000
 -USER=US09397548_@CGN1_1_167 -NCPU=6 -ICPU=3 -LONGLOG -NO_XLPXY
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Query length: 1018
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Database length: 87301344
Search time (sec): 184.840000



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; Patent No. 5429921
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Feldman, Daniel
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fitch, Even, Tabin & Flannery
;      STREET:  135 S. LaSalle
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  U.S.A.
;      ZIP:  60603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/745,206A
;      FILING DATE:  19910815
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Feder, Scott B
;      REFERENCE/DOCKET NUMBER:  51504
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-372-7842
;  INFORMATION FOR SEQ ID NO:  24:
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US-07-745-206A-24


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; Patent No. 5876958
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,363
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-51506
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  24:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3566 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  unknown
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
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US-08-311-363-24
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 Percent Similarity: 100.000   Percent Identity: 100.000

alignment_block:
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; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
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;       APPLICATION NUMBER:  07/868,354
;       FILING DATE:  April 10, 1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/745,206
;       FILING DATE:  15-AUG-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/620,250
;       FILING DATE:  30-NOV-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/482,384
;       FILING DATE:  20-FEB-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/603,751
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US89/01408
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/176,899
;       FILING DATE:  04-APR-1988
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  6362-52517
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  11:
;     SEQUENCE CHARACTERISTICS:
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;       TYPE:  nucleic acid
;       STRANDEDNESS:  double
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seq_documentation_block:
; Sequence 33, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  33:
;    SEQUENCE CHARACTERISTICS:
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; Patent No. 5846757
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  29
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BROWN, MARTIN, HALLER & McCLAIN
;      STREET:  1660 UNION STREET
;      CITY:  SAN DIEGO
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92101
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/193,078B
;      FILING DATE:  07-FEB-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/868,354
;      FILING DATE:  10-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-53607
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-238-0999
;      TELEFAX:  619-238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
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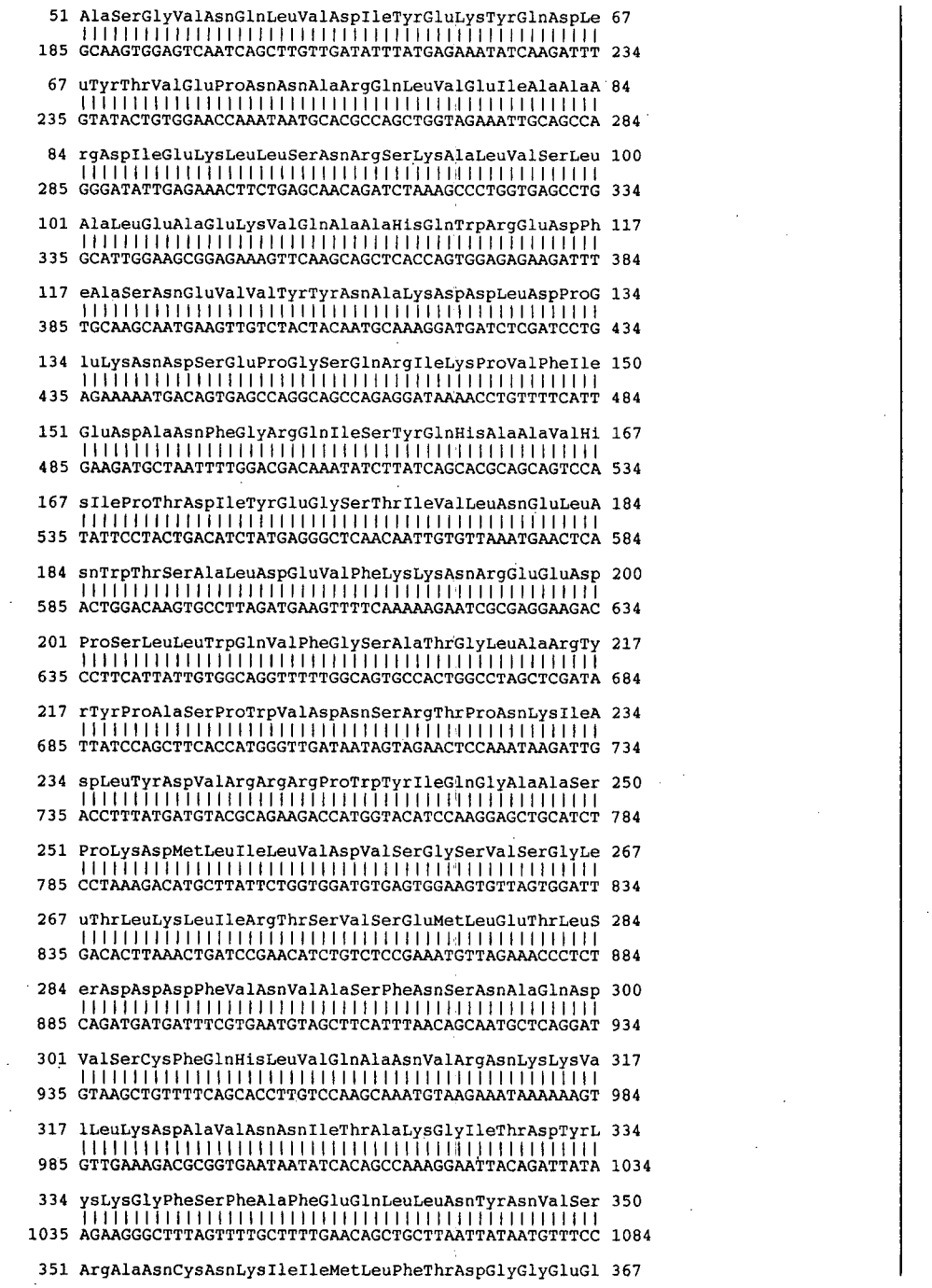
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; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
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;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
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;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  11:
;     SEQUENCE CHARACTERISTICS:
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;       TYPE:  nucleic acid
;       STRANDEDNESS:  double
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA (genomic)
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US-08-223-305C-11


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              Ratio:  5.251                 Gaps:      0
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; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
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;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
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;      COMPUTER:  IBM Compatible
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;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
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;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
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;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
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; Sequence 11, Application US/08149097D
; Patent No. 5874236
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  40
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/149,097D
;      FILING DATE:  05-NOV-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/105,536
;      FILING DATE:  11-AUG-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US92/06903
;      FILING DATE:  14-AUG-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/914,231
;      FILING DATE:  13-JUL-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/868,354
;      FILING DATE:  10-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-55038
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
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; Patent No. 6090623
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Gillespie, Alison
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  38
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  92101
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/949,386
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/290,012
;      FILING DATE:  11-AUG-1994
;      APPLICATION NUMBER:  08/149,097
;      FILING DATE:  5-NOV-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/105,536
;      FILING DATE:  11-AUG-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  519808
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
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;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
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US-08-949-386-11


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;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Gillespie, Alison
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  38
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  92101
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
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;       FILING DATE:
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/404,950
;       FILING DATE:  13-MAR-1995
;       APPLICATION NUMBER:  08/336,257
;       FILING DATE:  7-NOV-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/314,083
;       FILING DATE:  28-SEPT-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/311,363
;       FILING DATE:  23-SEPT-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/290,012
;       FILING DATE:  11-AUG-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/223,305
;       FILING DATE:  4-APR-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/193,078
;       FILING DATE:  07-FEB-1994
;     PRIOR APPLICATION DATA:
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;       FILING DATE:  5-NOV-1993
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;     PRIOR APPLICATION DATA:
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;       FILING DATE:  13-JULY-1992
;     PRIOR APPLICATION DATA:
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;       FILING DATE:  10-APR-1992
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;       FILING DATE:  14-AUG-1992
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;       APPLICATION NUMBER:  07/745,206
;       FILING DATE:  15-AUG-1991
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;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/482,384
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;       APPLICATION NUMBER:  PCT/US89/01408
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/176,899
;       FILING DATE:  04-APR-1988
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  6362-519812
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619) 238-0999
;       TELEFAX:  (619) 238-0062
;   INFORMATION FOR SEQ ID NO:  11:
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;       TYPE:  nucleic acid
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US-08-450-562-11


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; Sequence 3, Application US/08713118
; Patent No. 6040436
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3298 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  20..3292
US-08-713-118-3


alignment_scores:
            Quality: 5342.00              Length:   1018
              Ratio:  5.248                Gaps:      0
 Percent Similarity: 100.000   Percent Identity: 99.902

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seq_documentation_block:
; Sequence 3, Application US/09452007
; Patent No. 6140485
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/452,007
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3298 base pairs
;      TYPE:  nucleic acid
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US-09-452-007-3


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seq_documentation_block:
; Sequence 20, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  20:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3657 base pairs
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;      TOPOLOGY:  linear
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US\08-455-543A-20


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; Sequence 20, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
```

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;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  20:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3657 base pairs
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US-08-223-305C-20


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;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  34:
;    SEQUENCE CHARACTERISTICS:
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US-08-455-543A-34


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GenCore version 4.5

OM protein - protein search, using sw model

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6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	5599	100.0	1091	1	US-07-745-206A-25	Sequence 25, Appl
2	5599	100.0	1091	1	US-08-455-543A-52	Sequence 52, Appl
3	5599	100.0	1091	2	US-08-223-305C-52	Sequence 52, Appl
4	5599	100.0	1091	2	US-08-311-363-25	Sequence 25, Appl
5	5595	99.9	1091	3	US-08-713-118-4	Sequence 4, Appli
6	5595	99.9	1091	4	US-09-452-007-4	Sequence 4, Appli
7	5559.5	99.3	1086	1	US-08-455-543A-54	Sequence 54, Appl
8	5559.5	99.3	1086	2	US-08-223-305C-54	Sequence 54, Appl
9	5542.5	99.0	1084	1	US-08-455-543A-56	Sequence 56, Appl
10	5542.5	99.0	1084	2	US-08-223-305C-56	Sequence 56, Appl
11	5523	98.6	1103	1	US-08-455-543A-53	Sequence 53, Appl
12	5523	98.6	1103	2	US-08-223-305C-53	Sequence 53, Appl
13	5503	98.3	1079	1	US-08-455-543A-55	Sequence 55, Appl
14	5503	98.3	1079	2	US-08-223-305C-55	Sequence 55, Appl
15	5385.5	96.2	1106	1	US-08-435-675B-5	Sequence 5, Appli
16	5367.5	95.9	1106	1	US-08-336-257A-8	Sequence 8, Appli
17	5134.5	91.7	1086	6	5386025-8	Patent No. 5386025
18	2581.5	46.1	508	1	US-08-435-675B-6	Sequence 6, Appli
19	182	3.3	885	3	US-09-074-579-5	Sequence 5, Appli
20	159.5	2.8	946	3	US-09-074-579-3	Sequence 3, Appli
21	154	2.8	903	1	US-08-021-601-12	Sequence 12, Appl
22	154	2.8	903	1	US-08-082-849B-12	Sequence 12, Appl
23	154	2.8	903	5	PCT-US94-01624-12	Sequence 12, Appl
24	152.5	2.7	789	1	US-08-471-033-32	Sequence 32, Appl
25	152.5	2.7	789	2	US-08-471-044-32	Sequence 32, Appl
26	152.5	2.7	789	2	US-08-463-483A-32	Sequence 32, Appl
27	152.5	2.7	789	2	US-08-471-046A-32	Sequence 32, Appl
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42	141.5	2.5	789	2	US-08-463-483A-29	Sequence 29, Appl
43	141.5	2.5	789	2	US-08-471-046A-29	Sequence 29, Appl
44	141.5	2.5	789	2	US-08-470-566B-29	Sequence 29, Appl
45	141.5	2.5	789	2	US-08-838-219B-2	Sequence 2, Appli

ALIGNMENTS

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RESULT 1
US-07-745-206A-25
; Sequence 25, Application US/07745206A
; Patent No. 5429921
;  GENERAL INFORMATION:
;    APPLICANT: Harpold, Michael
;    APPLICANT: Ellis, Steven
;    APPLICANT: Williams, Mark
;    APPLICANT: McCue, Ann
;    APPLICANT: Feldman, Daniel
;    TITLE OF INVENTION: Human Calcium Channel Compositions and
;    TITLE OF INVENTION: Methods
;    NUMBER OF SEQUENCES: 32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE: Fitch, Even, Tabin & Flannery
;      STREET: 135 S. LaSalle
;      CITY: Chicago
;      STATE: Illinois
;      COUNTRY: U.S.A.
;      ZIP: 60603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE: Floppy disk
;      COMPUTER: IBM PC compatible
;      OPERATING SYSTEM: PC-DOS/MS-DOS
;      SOFTWARE: PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER: US/07/745,206A
;      FILING DATE: 19910815
;      CLASSIFICATION: 435
;    ATTORNEY/AGENT INFORMATION:
;      NAME: Feder, Scott B
;      REFERENCE/DOCKET NUMBER: 51504
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE: 312-372-7842
;  INFORMATION FOR SEQ ID NO: 25:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH: 1091 amino acids
;      TYPE: AMINO ACID
;      TOPOLOGY: linear
;    MOLECULE TYPE: protein
US-07-745-206A-25


  Query Match 100.0%; Score 5599; DB 1; Length 1091;
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RESULT   2
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; Sequence 52, Application US/08455543A
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; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-52


  Query Match           100.0%;  Score 5599;  DB 1;  Length 1091;
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  Matches 1063;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

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Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

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RESULT   3
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US-08-223-305C-52
; Sequence 52, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-52


  Query Match           100.0%;  Score 5599;  DB 2;  Length 1091;
  Best Local Similarity   100.0%;  Pred. No. 0;
  Matches 1063;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
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Db   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063


RESULT   4
US-08-311-363-25
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; Sequence 25, Application US/08311363
; Patent No. 5876958
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,363
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-51506
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  25:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-311-363-25


  Query Match           100.0%;  Score 5599;  DB 2;  Length 1091;
  Best Local Similarity  100.0%;  Pred. No. 0;
  Matches 1063;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

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Db     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

Qy    1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
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RESULT   5
US-08-713-118-4
; Sequence 4, Application US/08713118
; Patent No. 6040436
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-713-118-4


  Query Match             99.9%;  Score 5595;  DB 3;  Length 1091;
  Best Local Similarity   99.9%;  Pred. No. 0;
  Matches 1062;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYALLHPNLQPKNPKSQEPVTL 540

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Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

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Db     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

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Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

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Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
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Db     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

Qy    1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
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Db    1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063


RESULT   6
US-09-452-007-4
; Sequence 4, Application US/09452007
; Patent No. 6140485
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/452,007
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-452-007-4


  Query Match           99.9%;  Score 5595;  DB 4;  Length 1091;
  Best Local Similarity  99.9%;  Pred. No. 0;
  Matches 1062;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
          ||||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||||
Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYALLHPNLQPKNPKSQEPVTL 540

Qy    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
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Db   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
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RESULT   7
US-08-455-543A-54
; Sequence 54, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  54:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1086 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-54

  Query Match           99.3%;  Score 5559.5;  DB 1;  Length 1086;
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  Matches 1058;  Conservative    0;  Mismatches    0;  Indels    5;  Gaps    1;

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Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||     |||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK-----EPVTL 535

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     536 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 595

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     596 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 655

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     656 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 715

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     716 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 775

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     776 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 835

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     836 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 895

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     896 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 955

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     956 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1015

Qy    1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
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Db 1016 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1058

RESULT 8
US-08-223-305C-54
; Sequence 54, Application US/08223305C
; Patent No. 5851824
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/223,305C
; FILING DATE: April 4, 1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/868,354
; FILING DATE: April 10, 1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745,206
; FILING DATE: 15-AUG-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/620,250
; FILING DATE: 30-NOV-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/482,384
; FILING DATE: 20-FEB-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/603,751
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US89/01408
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/176,899
; FILING DATE: 04-APR-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 52516 (P519739)
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0999
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 54:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1086 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FRAGMENT TYPE: internal
US-08-223-305C-54

Query Match 99.3%; Score 5559.5; DB 2; Length 1086;
Best Local Similarity 99.5%; Pred. No. 0;

Matches 1058; Conservative 0; Mismatches 0; Indels 5; Gaps 1;

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Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

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Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK-----EPVTL 535

Qy    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    536 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 595

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Qy    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db    776 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 835

Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db    836 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 895

Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db    896 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 955

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    956 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1015

Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
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Db   1016 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1058
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RESULT   9
US-08-455-543A-56
; Sequence 56, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  56:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1084 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-56
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  Query Match           99.0%;  Score 5542.5;  DB 1;  Length 1084;
  Best Local Similarity  99.2%;  Pred. No. 0;
  Matches 1055;  Conservative    0;  Mismatches    1;  Indels    7;  Gaps    1;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
           |||||||||||||||||||||||     |||||||||||||||||||||||||||||||||
Db     601 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 653

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     654 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 713

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     714 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 773

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     774 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 833

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     834 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 893

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     894 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 953

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     954 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1013

Qy    1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
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Db     1014 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1056

RESULT  10
US-08-223-305C-56
; Sequence 56, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  56:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1084 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-56

  Query Match             99.0%;  Score 5542.5;  DB 2;  Length 1084;
  Best Local Similarity   99.2%;  Pred. No. 0;
  Matches 1055;  Conservative    0;  Mismatches    1;  Indels    7;  Gaps    1;

Qy          1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Qy         61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db         61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy        121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db        121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

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Db        181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy        241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db        241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy        301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db        301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy        361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy        421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db        421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy        481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db        481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy        541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Qy        601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db        601 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 653

Qy        661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db        654 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 713

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Db        714 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 773

Qy        781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db        774 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 833

Qy        841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db        834 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 893

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Db        894 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 953

Qy        961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        954 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1013

Qy       1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
              |||||||||||||||||||||||||||||||||||||||||||
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Db   1014 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1056


RESULT 11
US-08-455-543A-53
; Sequence 53, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1103 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-53
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  Query Match             98.6%;  Score 5523;  DB 1;  Length 1103;
  Best Local Similarity   97.5%;  Pred. No. 0;
  Matches 1055;  Conservative    0;  Mismatches    1;  Indels   26;  Gaps    2;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK---------- 530
           ||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKPIGVGIPTIN 540

Qy     531 ---------NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 581
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 LRKRRPNIQNPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 600

Qy     582 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNF 641
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNF 653

Qy     642 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 701
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     654 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 713

Qy     702 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 761
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     714 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 773

Qy     762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 821
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 833

Qy     822 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 881
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     834 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 893

Qy     882 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 941
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     894 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 953

Qy     942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1001
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1013
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Qy   1002 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGG 1061
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Db   1014 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGG 1073

Qy   1062 VS 1063
          ||
Db   1074 VS 1075


RESULT  12
US-08-223-305C-53
; Sequence 53, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1103 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-53


  Query Match             98.6%;  Score 5523;  DB 2;  Length 1103;
  Best Local Similarity   97.5%;  Pred. No. 0;
  Matches 1055;  Conservative    0;  Mismatches    1;  Indels   26;  Gaps    2;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK---------- 530
          ||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKPIGVGIPTIN 540

Qy    531 ---------NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 581
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 LRKRRPNIQNPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 600

Qy    582 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNF 641
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNF 653

Qy    642 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 701
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    654 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 713

Qy    702 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 761
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    714 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 773

Qy    762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 821
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Db    774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 833

Qy    822 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 881
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    834 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 893

Qy    882 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 941
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    894 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 953

Qy    942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1001
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Db    954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1013

Qy   1002 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGG 1061
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1014 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGG 1073

Qy   1062 VS 1063
          ||
Db   1074 VS 1075


RESULT  13
US-08-455-543A-55
; Sequence 55, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  55:

;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1079 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-55


  Query Match             98.3%;  Score 5503;  DB 1;  Length 1079;
  Best Local Similarity   98.8%;  Pred. No. 0;
  Matches 1050;  Conservative    0;  Mismatches    1;  Indels   12;  Gaps    2;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK-----EPVTL 535

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     536 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 595

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     596 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 648

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     649 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 708

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     709 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 768

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     769 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 828

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     829 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 888
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Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    889 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 948

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    949 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1008

Qy   1021 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1063
          |||||||||||||||||||||||||||||||||||||||||||
Db   1009 QAEQTSDGPNPCDMVKQPRYRKGPDVCFDNNVLEDYTDCGGVS 1051


RESULT  14
US-08-223-305C-55
; Sequence 55, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  55:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1079 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-55


  Query Match             98.3%;  Score 5503;  DB 2;  Length 1079;
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  Matches 1050;  Conservative    0;  Mismatches    1;  Indels   12;  Gaps    2;

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Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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RESULT  15
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; Sequence 5, Application US/08435675B
; Patent No. 5710250
;  GENERAL INFORMATION:
;    APPLICANT:  Ellis, Steven Bradley
;    APPLICANT:  Williams, Mark E.
;    APPLICANT:  Harpold, Michael Miller
;    APPLICANT:  Schwartz, Arnold
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  CALCIUM CHANNEL COMPOSITIONS AND METHODS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/435,675B
;      FILING DATE:  05-MAY-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/314,083
;      FILING DATE:  28-SEP-1994
;      APPLICATION NUMBER:  US 07/914,231
;      FILING DATE:  13-JUL-1992
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  08-NOV-1990
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-53193
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-238-0999
;      TELEFAX:  619-238-0062
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  5:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1106 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-435-675B-5


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Job time: 31349 sec

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Date: Jun 8, 2001  7:58 PM

About: Results were produced by the GenCore software, version 4.5,
       Copyright (c) 1993-2000 Compugen Ltd.

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seq_documentation_block:
; Sequence 24, Application US/07745206A
; Patent No. 5429921
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Feldman, Daniel
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fitch, Even, Tabin & Flannery
;      STREET:  135 S. LaSalle
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  U.S.A.
;      ZIP:  60603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/745,206A
;      FILING DATE:  19910815
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Feder, Scott B
;      REFERENCE/DOCKET NUMBER:  51504
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-372-7842
;  INFORMATION FOR SEQ ID NO:  24:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3566 base pairs
;      TYPE:  NUCLEIC ACID
;      STRANDEDNESS:  unknown
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
;      NAME/KEY:  CDS
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US-07-745-206A-24


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              Ratio: 5.267                  Gaps:      0
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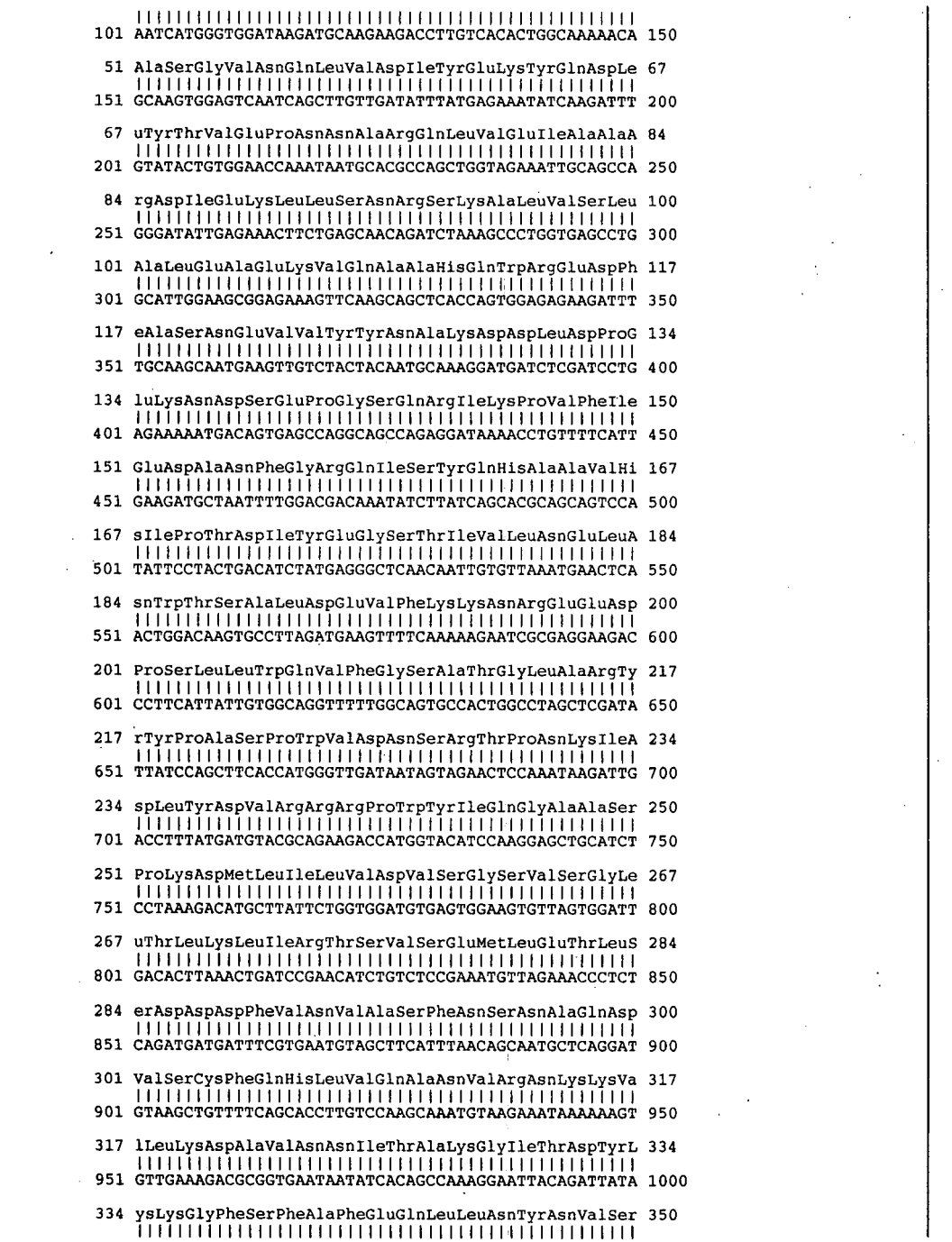
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; Patent No. 5876958
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,363
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-51506
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  24:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3566 base pairs
;      TYPE:  nucleic acid
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;       TOPOLOGY:  unknown
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            Quality: 5599.00              Length:   1063
              Ratio:  5.267                 Gaps:      0
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; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
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;       CITY:  San Diego
;       STATE:  California
;       COUNTRY:  USA
;       ZIP:  92101-2926
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  DOS
;       SOFTWARE:  FastSEQ Version 1.5
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/455,543A
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/223,305
;       FILING DATE:  April 4, 1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/868,354
;       FILING DATE:  April 10, 1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/745,206
;       FILING DATE:  15-AUG-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/620,250
;       FILING DATE:  30-NOV-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/482,384
;       FILING DATE:  20-FEB-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/603,751
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US89/01408
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/176,899
;       FILING DATE:  04-APR-1988
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  6362-52517
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  11:
;     SEQUENCE CHARACTERISTICS:
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;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  33:
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US-08-455-543A-33


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; Patent No. 5846757
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  29
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BROWN, MARTIN, HALLER & McCLAIN
;      STREET:  1660 UNION STREET
;      CITY:  SAN DIEGO
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92101
;    COMPUTER READABLE FORM:
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;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
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;      FILING DATE:  07-FEB-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/868,354
;      FILING DATE:  10-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-53607
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-238-0999
;      TELEFAX:  619-238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  35..3310
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US-08-193-078B-11


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; Sequence 11, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
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;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
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;      APPLICATION NUMBER:  WO PCT/US89/01408
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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  35..3310
;      OTHER INFORMATION:  /standard_name= "Alpha-2"
;    FEATURE:
;      NAME/KEY:  5'UTR
;      LOCATION:  1..34
;    FEATURE:
;      NAME/KEY:  3'UTR
;      LOCATION:  3308..3600
US-08-223-305C-11


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            Quality: 5599.00              Length:   1063
              Ratio:  5.267                 Gaps:      0
 Percent Similarity: 100.000   Percent Identity: 100.000

alignment_block:
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seq_documentation_block:
; Sequence 33, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  33:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
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;    FEATURE:
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US-08-223-305C-33


alignment_scores:
            Quality: 5599.00              Length:   1063
              Ratio:  5.267                 Gaps:      0
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 US-09-397-548-17 x US-08-223-305C-33   ..

 Align seg 1/1  to: US-08-223-305C-33  from: 1  to: 3600

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 117 eAlaSerAsnGluValValTyrTyrAsnAlaLysAspAspLeuAspProG 134
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seq_documentation_block:
; Sequence 11, Application US/08149097D
; Patent No. 5874236
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  40
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/149,097D
;      FILING DATE:  05-NOV-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/105,536
;      FILING DATE:  11-AUG-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US92/06903
;      FILING DATE:  14-AUG-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/914,231
;      FILING DATE:  13-JUL-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/868,354
;      FILING DATE:  10-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-55038
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
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; Patent No. 6090623
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Gillespie, Alison
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  38
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  92101
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/949,386
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/290,012
;      FILING DATE:  11-AUG-1994
;      APPLICATION NUMBER:  08/149,097
;      FILING DATE:  5-NOV-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/105,536
;      FILING DATE:  11-AUG-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  519808
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
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; Patent No. 6096514
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Gillespie, Alison
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  38
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  92101
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/450,562
;      FILING DATE:
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/404,950
;      FILING DATE:  13-MAR-1995
;      APPLICATION NUMBER:  08/336,257
;      FILING DATE:  7-NOV-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/314,083
;      FILING DATE:  28-SEPT-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/311,363
;      FILING DATE:  23-SEPT-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/290,012
;      FILING DATE:  11-AUG-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  4-APR-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/193,078
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;      FILING DATE:  13-JULY-1992
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;      APPLICATION NUMBER:  07/868,354
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;      FILING DATE:  14-AUG-1992
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;      FILING DATE:  15-AUG-1991
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;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
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;      APPLICATION NUMBER:  07/482,384
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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-519812
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
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; Sequence 3, Application US/08713118
; Patent No. 6040436
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
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;       COUNTRY:  USA
;       ZIP:  02173-4799
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/713,118
;       FILING DATE:  16-SEP-1996
;       CLASSIFICATION:  435
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Mata, Elizabeth W.
;       REGISTRATION NUMBER:  38,236
;       REFERENCE/DOCKET NUMBER:  ACC96-01
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  617-861-6240
;       TELEFAX:  617-861-9540
;   INFORMATION FOR SEQ ID NO:  3:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  3298 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  double
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  cDNA
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  20..3292
US-08-713-118-3


alignment_scores:
            Quality: 5595.00              Length:   1063
              Ratio:  5.263                Gaps:      0
 Percent Similarity: 100.000   Percent Identity: 99.906

alignment_block:
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seq_documentation_block:
; Sequence 3, Application US/09452007
; Patent No. 6140485
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/452,007
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
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;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
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; Sequence 20, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  20:
;    SEQUENCE CHARACTERISTICS:
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seq_documentation_block:
; Sequence 20, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
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;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  52516  (P519739)
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  20:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  3657 base pairs
;       TYPE:  nucleic acid
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;       TOPOLOGY:  linear
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US-08-223-305C-20


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;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  34:
;    SEQUENCE CHARACTERISTICS:
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     ||||||||||||||||||||||||||||||||||||||||||||||||||
3070 ACTGCTCATACAAGCGGAGCAGACTTCTGACGGTCCAAATCCTTGTGACA 3119

1034 etValLysGlnProArgTyrArgLysGlyProAspValCysPheAspAsn 1050
     ||||||||||||||||||||||||||||||||||||||||||||||||||
3120 TGGTTAAGCAACCTAGATACCGAAAAGGGCCTGATGTCTGCTTTGATAAC 3169

1051 AsnValLeuGluAspTyrThrAspCysGlyGlyValSer 1063
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3170 AATGTCTTGGAGGATTATACTGACTGTGGTGGTGTTTCT 3208
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GenCore version 4.5

OM protein - protein search, using sw model

Run on: June 8, 2001, 19:37:49 ; Search time 63.61 Seconds
(without alignments)
312.882 Million cell updates/sec

Title: US-09-397-548-16
Perfect score: 5443
Sequence: 1 MAAGCLLALTLTLFQSLLIG.....RLLIQAEQTSDGPNPCDMVK 1036

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 185757 seqs, 19210857 residues

Total number of hits satisfying chosen parameters: 185757

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	5443	100.0	1091	1	US-07-745-206A-25	Sequence 25, Appl
2	5443	100.0	1091	1	US-08-455-543A-52	Sequence 52, Appl
3	5443	100.0	1091	2	US-08-223-305C-52	Sequence 52, Appl
4	5443	100.0	1091	2	US-08-311-363-25	Sequence 25, Appl
5	5439	99.9	1091	3	US-08-713-118-4	Sequence 4, Appli
6	5439	99.9	1091	4	US-09-452-007-4	Sequence 4, Appli
7	5403.5	99.3	1086	1	US-08-455-543A-54	Sequence 54, Appl
8	5403.5	99.3	1086	2	US-08-223-305C-54	Sequence 54, Appl
9	5386.5	99.0	1084	1	US-08-455-543A-56	Sequence 56, Appl
10	5386.5	99.0	1084	2	US-08-223-305C-56	Sequence 56, Appl
11	5367	98.6	1103	1	US-08-455-543A-53	Sequence 53, Appl
12	5367	98.6	1103	2	US-08-223-305C-53	Sequence 53, Appl
13	5347	98.2	1079	1	US-08-455-543A-55	Sequence 55, Appl
14	5347	98.2	1079	2	US-08-223-305C-55	Sequence 55, Appl
15	5229.5	96.1	1106	1	US-08-435-675B-5	Sequence 5, Appli
16	5211.5	95.7	1106	1	US-08-336-257A-8	Sequence 8, Appli
17	4978.5	91.5	1086	6	5386025-8	Patent No. 5386025
18	2581.5	47.4	508	1	US-08-435-675B-6	Sequence 6, Appli
19	182	3.3	885	3	US-09-074-579-5	Sequence 5, Appli
20	159.5	2.9	946	3	US-09-074-579-3	Sequence 3, Appli
21	154	2.8	903	1	US-08-021-601-12	Sequence 12, Appl
22	154	2.8	903	1	US-08-082-849B-12	Sequence 12, Appl
23	154	2.8	903	5	PCT-US94-01624-12	Sequence 12, Appl
24	152.5	2.8	789	1	US-08-471-033-32	Sequence 32, Appl
25	152.5	2.8	789	2	US-08-471-044-32	Sequence 32, Appl
26	152.5	2.8	789	2	US-08-463-483A-32	Sequence 32, Appl
27	152.5	2.8	789	2	US-08-471-046A-32	Sequence 32, Appl
28	152.5	2.8	789	2	US-08-470-566B-32	Sequence 32, Appl
29	152.5	2.8	789	2	US-08-838-219B-4	Sequence 4, Appli
30	152.5	2.8	789	2	US-08-469-334-32	Sequence 32, Appl
31	152.5	2.8	789	3	US-09-300-529-32	Sequence 32, Appl
32	152.5	2.8	789	3	US-09-233-336A-4	Sequence 4, Appli
33	152.5	2.8	789	4	US-09-233-752A-4	Sequence 4, Appli
34	150.5	2.8	789	4	US-08-960-780-6	Sequence 6, Appli
35	148.5	2.7	790	4	US-08-960-780-4	Sequence 4, Appli
36	147.5	2.7	746	2	US-08-838-219B-6	Sequence 6, Appli
37	147.5	2.7	746	3	US-09-233-336A-6	Sequence 6, Appli
38	147.5	2.7	746	4	US-09-233-752A-6	Sequence 6, Appli
39	145.5	2.7	790	4	US-08-960-780-8	Sequence 8, Appli
40	141.5	2.6	789	1	US-08-471-033-29	Sequence 29, Appl
41	141.5	2.6	789	2	US-08-471-044-29	Sequence 29, Appl
42	141.5	2.6	789	2	US-08-463-483A-29	Sequence 29, Appl
43	141.5	2.6	789	2	US-08-471-046A-29	Sequence 29, Appl
44	141.5	2.6	789	2	US-08-470-566B-29	Sequence 29, Appl
45	141.5	2.6	789	2	US-08-838-219B-2	Sequence 2, Appli

ALIGNMENTS

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RESULT 1
US-07-745-206A-25
; Sequence 25, Application US/07745206A
; Patent No. 5429921
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Feldman, Daniel
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fitch, Even, Tabin & Flannery
;      STREET:  135 S. LaSalle
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  U.S.A.
;      ZIP:  60603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/745,206A
;      FILING DATE:  19910815
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Feder, Scott B
;      REFERENCE/DOCKET NUMBER:  51504
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-372-7842
;  INFORMATION FOR SEQ ID NO:  25:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  AMINO ACID
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-07-745-206A-25

  Query Match          100.0%;  Score 5443;  DB 1;  Length 1091;
  Best Local Similarity  100.0%;  Pred. No. 0;
  Matches 1036;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

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Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

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Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
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Db     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

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RESULT 2
US-08-455-543A-52
; Sequence 52, Application US/08455543A

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; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-52


  Query Match           100.0%;  Score 5443;  DB 1;  Length 1091;
  Best Local Similarity  100.0%;  Pred. No. 0;
  Matches 1036;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
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Db     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

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Db     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

Qy    1021 QAEQTSDGPNPCDMVK 1036
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Db    1021 QAEQTSDGPNPCDMVK 1036


RESULT   3
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US-08-223-305C-52
; Sequence 52, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-52


  Query Match           100.0%;  Score 5443;  DB 2;  Length 1091;
  Best Local Similarity  100.0%;  Pred. No. 0;
  Matches 1036;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

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Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

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Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
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Db    601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660

Qy    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
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Db    661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

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Db    721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

Qy    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db    781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900

Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
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Qy   1021 QAEQTSDGPNPCDMVK 1036
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Db   1021 QAEQTSDGPNPCDMVK 1036


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US-08-311-363-25
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; Sequence 25, Application US/08311363
; Patent No. 5876958
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,363
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-51506
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  25:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-311-363-25


  Query Match           100.0%;  Score 5443;  DB 2;  Length 1091;
  Best Local Similarity  100.0%;  Pred. No. 0;
  Matches 1036;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

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Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Qy    1021 QAEQTSDGPNPCDMVK 1036
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Db    1021 QAEQTSDGPNPCDMVK 1036


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; Sequence 4, Application US/08713118
; Patent No. 6040436
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-713-118-4


  Query Match             99.9%;  Score 5439;  DB 3;  Length 1091;
  Best Local Similarity   99.9%;  Pred. No. 0;
  Matches 1035;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960

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Db    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

Qy   1021 QAEQTSDGPNPCDMVK 1036
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; Sequence 4, Application US/09452007
; Patent No. 6140485
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/452,007
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1091 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-452-007-4


  Query Match             99.9%;  Score 5439;  DB 4;  Length 1091;
  Best Local Similarity   99.9%;  Pred. No. 0;
  Matches 1035;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

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Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

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Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

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Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYALLHPNLQPKNPKSQEPVTL 540

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Db    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020

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Db   1021 QAEQTSDGPNPCDMVK 1036
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US-08-455-543A-54
; Sequence 54, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  54:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1086 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-54

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  Matches 1031;  Conservative    0;  Mismatches    0;  Indels    5;  Gaps    1;

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Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db     716 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 775

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     776 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 835

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     836 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 895

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Db 1016 QAEQTSDGPNPCDMVK 1031

RESULT 8
US-08-223-305C-54
; Sequence 54, Application US/08223305C
; Patent No. 5851824
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/223,305C
; FILING DATE: April 4, 1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/868,354
; FILING DATE: April 10, 1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745,206
; FILING DATE: 15-AUG-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/620,250
; FILING DATE: 30-NOV-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/482,384
; FILING DATE: 20-FEB-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/603,751
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US89/01408
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/176,899
; FILING DATE: 04-APR-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 52516 (P519739)
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0999
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 54:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1086 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FRAGMENT TYPE: internal
US-08-223-305C-54

Query Match 99.3%; Score 5403.5; DB 2; Length 1086;
Best Local Similarity 99.5%; Pred. No. 0;

Matches 1031; Conservative 0; Mismatches 0; Indels 5; Gaps 1;

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Qy    541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
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Db    776 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 835

Qy    841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    836 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 895

Qy    901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    896 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 955

Qy    961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
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Db    956 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1015

Qy   1021 QAEQTSDGPNPCDMVK 1036
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Db   1016 QAEQTSDGPNPCDMVK 1031
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RESULT   9
US-08-455-543A-56
; Sequence 56, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  56:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1084 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-56
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  Query Match           99.0%;  Score 5386.5;  DB 1;  Length 1084;
  Best Local Similarity  99.2%;  Pred. No. 0;
  Matches 1028;  Conservative    0;  Mismatches    1;  Indels    7;  Gaps    1;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
           |||||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db     601 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 653

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     654 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 713

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db     714 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 773

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     774 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 833

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     834 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 893

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     894 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 953

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     954 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1013

Qy    1021 QAEQTSDGPNPCDMVK 1036
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Db   1014 QAEQTSDGPNPCDMVK 1029


RESULT  10
US-08-223-305C-56
; Sequence 56, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  56:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1084 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-56


  Query Match             99.0%;  Score 5386.5;  DB 2;  Length 1084;
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  Best Local Similarity   99.2%;  Pred. No. 0;
  Matches 1028;  Conservative    0;  Mismatches    1;  Indels    7;  Gaps    1;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
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Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
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Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
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Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
           |||||||||||||||||||||||        ||||||||||||||||||||||||||||||
Db     601 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 653

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Db     654 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 713

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
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Db     714 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 773

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
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Db     774 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 833

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
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Db     834 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 893

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
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Db     894 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 953

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     954 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1013

Qy    1021 QAEQTSDGPNPCDMVK 1036
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Db   1014 QAEQTSDGPNPCDMVK 1029


RESULT 11
US-08-455-543A-53
; Sequence 53, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1103 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-53
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  Query Match             98.6%;  Score 5367;  DB 1;  Length 1103;
  Best Local Similarity   97.4%;  Pred. No. 0;
  Matches 1028;  Conservative    0;  Mismatches    1;  Indels   26;  Gaps    2;

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Db      1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
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Db     61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
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Db    241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK---------- 530
          ||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKPIGVGIPTIN 540

Qy    531 ---------NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 581
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 LRKRRPNIQNPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 600

Qy    582 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNF 641
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNF 653

Qy    642 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 701
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    654 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 713

Qy    702 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 761
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    714 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 773

Qy    762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 821
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 833

Qy    822 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 881
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    834 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 893

Qy    882 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 941
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    894 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 953

Qy    942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1001
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1013
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Qy   1002 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVK 1036
          |||||||||||||||||||||||||||||||||||
Db   1014 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVK 1048


RESULT 12
US-08-223-305C-53
; Sequence 53, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1103 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-53
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  Query Match             98.6%;  Score 5367;  DB 2;  Length 1103;
  Best Local Similarity   97.4%;  Pred. No. 0;
  Matches 1028;  Conservative    0;  Mismatches    1;  Indels   26;  Gaps    2;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK---------- 530
           ||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKPIGVGIPTIN 540

Qy     531 ---------NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 581
                    |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 LRKRRPNIQNPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 600

Qy     582 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNF 641
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 DKGNRTYTWTPVNGTDYSLALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNF 653

Qy     642 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 701
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     654 EESGYTFIAPRDYCNDLKISDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTN 713

Qy     702 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 761
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     714 ELVQNYWSKQKNIKGVKARFVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNY 773

Qy     762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 821
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 833

Qy     822 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 881
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     834 CAGPVCDCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYA 893

Qy     882 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 941
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     894 FNKSYDYQSVCEPGAAPKQGAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPR 953

Qy     942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1001
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNL 1013

Qy    1002 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVK 1036
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Db    1014 IFIMVESKGTCPCDTRLLIQAEQTSDGPNPCDMVK 1048


RESULT 13
US-08-455-543A-55
; Sequence 55, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  55:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1079 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-455-543A-55
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  Query Match             98.2%;  Score 5347;  DB 1;  Length 1079;
  Best Local Similarity   98.7%;  Pred. No. 0;
  Matches 1023;  Conservative    0;  Mismatches    1;  Indels   12;  Gaps    2;

Qy       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
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Db       1 MAAGCLLALTLTLFQSLLIGPSSEEPFPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60

Qy      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120

Qy     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180

Qy     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240

Qy     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 RPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300

Qy     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 VSCFQHLVQANVRNKKVLKDAVNNITAKGITDYKKGFSFAFEQLLNYNVSRANCNKIIML 360

Qy     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVGQHNYERGPIQWMACENKGYYYEIPSIGAIR 420

Qy     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 INTQEYLDVLGRPMVLAGDKAKQVQWTNVYLDALELGLVITGTLPVFNITGQFENKTNLK 480

Qy     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPKNPKSQEPVTL 540
           |||||||||||||||||||||||||||||||||||||||||||||||||||     |||||
Db     481 NQLILGVMGVDVSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPNLQPK-----EPVTL 535

Qy     541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     536 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 595

Qy     601 ALVLPTYSFYYIKAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660
           ||||||||||||||||||||||        ||||||||||||||||||||||||||||||
Db     596 ALVLPTYSFYYIKAKLEETITQARY-------SETLKPDNFEESGYTFIAPRDYCNDLKI 648

Qy     661 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     649 SDNNTEFLLNFNEFIDRKTPNNPSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 708

Qy     721 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     709 FVVTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 768

Qy     781 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     769 MVSKAVEIYIQGKLLKPAVVGIKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI 828

Qy     841 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     829 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNISVYAFNKSYDYQSVCEPGAAPKQ 888

Qy     901 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     889 GAGHRSAYVPSVADILQIGWWATAAAWSILQQFLLSLTFPRLLEAVEMEDDDFTASLSKQ 948

Qy     961 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     949 SCITEQTQYFFDNDSKSFSGVLDCGNCSRIFHGEKLMNTNLIFIMVESKGTCPCDTRLLI 1008
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Qy   1021 QAEQTSDGPNPCDMVK 1036
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Db   1009 QAEQTSDGPNPCDMVK 1024


RESULT  14
US-08-223-305C-55
; Sequence 55, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  55:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1079 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-223-305C-55
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Qy    121 EVVYYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVL 180
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Qy    181 NELNWTSALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVRR 240
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; Sequence 5, Application US/08435675B
; Patent No. 5710250
;  GENERAL INFORMATION:
;    APPLICANT:  Ellis, Steven Bradley
;    APPLICANT:  Williams, Mark E.
;    APPLICANT:  Harpold, Michael Miller
;    APPLICANT:  Schwartz, Arnold
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  CALCIUM CHANNEL COMPOSITIONS AND METHODS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/435,675B
;      FILING DATE:  05-MAY-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/314,083
;      FILING DATE:  28-SEP-1994
;      APPLICATION NUMBER:  US 07/914,231
;      FILING DATE:  13-JUL-1992
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  08-NOV-1990
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-53193
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-238-0999
;      TELEFAX:  619-238-0062
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  5:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1106 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FRAGMENT TYPE:  internal
US-08-435-675B-5


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About: Results were produced by the GenCore software, version 4.5,
       Copyright (c) 1993-2000 Compugen Ltd.

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; Patent No. 5429921
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Feldman, Daniel
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fitch, Even, Tabin & Flannery
;      STREET:  135 S. LaSalle
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  U.S.A.
;      ZIP:  60603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/745,206A
;      FILING DATE:  19910815
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Feder, Scott B
;      REFERENCE/DOCKET NUMBER:  51504
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-372-7842
;  INFORMATION FOR SEQ ID NO:  24:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3566 base pairs
;      TYPE:  NUCLEIC ACID
;      STRANDEDNESS:  unknown
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..3273
US-07-745-206A-24


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              Ratio:  5.254               Gaps:      0
 Percent Similarity: 100.000   Percent Identity: 100.000

alignment_block:
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; Patent No. 5876958
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  Human Calcium Channel Compositions and
;    TITLE OF INVENTION:  Methods
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,363
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-51506
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  24:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3566 base pairs
;      TYPE:  nucleic acid
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;      TOPOLOGY:  unknown
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; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
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;       SOFTWARE:  FastSEQ Version 1.5
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/455,543A
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/223,305
;       FILING DATE:  April 4, 1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/868,354
;       FILING DATE:  April 10, 1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/745,206
;       FILING DATE:  15-AUG-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/620,250
;       FILING DATE:  30-NOV-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/482,384
;       FILING DATE:  20-FEB-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/603,751
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US89/01408
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/176,899
;       FILING DATE:  04-APR-1988
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  6362-52517
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  11:
;     SEQUENCE CHARACTERISTICS:
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US-08-455-543A-11


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; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-52517
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  33:
;    SEQUENCE CHARACTERISTICS:
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; Patent No. 5846757
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  29
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BROWN, MARTIN, HALLER & McCLAIN
;      STREET:  1660 UNION STREET
;      CITY:  SAN DIEGO
;      STATE:  CA
;      COUNTRY:  USA
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;    COMPUTER READABLE FORM:
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;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/193,078B
;      FILING DATE:  07-FEB-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/868,354
;      FILING DATE:  10-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-53607
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-238-0999
;      TELEFAX:  619-238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
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;      LOCATION:  3308..3600
US-08-193-078B-11


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; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
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;      FILING DATE:  20-FEB-1990
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;      FILING DATE:  04-APR-1989
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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  35..3310
;      OTHER INFORMATION:  /standard_name= "Alpha-2"
;    FEATURE:
;      NAME/KEY:  5'UTR
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US-08-223-305C-11


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              Ratio:  5.254                Gaps:      0
 Percent Similarity: 100.000   Percent Identity: 100.000

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seq_documentation_block:
; Sequence 33, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  33:
;    SEQUENCE CHARACTERISTICS:
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US-08-223-305C-33


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seq_documentation_block:
; Sequence 11, Application US/08149097D
; Patent No. 5874236
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  40
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/149,097D
;      FILING DATE:  05-NOV-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/105,536
;      FILING DATE:  11-AUG-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US92/06903
;      FILING DATE:  14-AUG-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/914,231
;      FILING DATE:  13-JUL-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/868,354
;      FILING DATE:  10-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-55038
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
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; Patent No. 6090623
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Gillespie, Alison
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  38
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  92101
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/949,386
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;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/290,012
;       FILING DATE:  11-AUG-1994
;       APPLICATION NUMBER:  08/149,097
;       FILING DATE:  5-NOV-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/105,536
;       FILING DATE:  11-AUG-1993
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  519808
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619) 238-0999
;       TELEFAX:  (619) 238-0062
;   INFORMATION FOR SEQ ID NO:  11:
;     SEQUENCE CHARACTERISTICS:
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US-08-949-386-11


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seq_documentation_block:
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; Patent No. 6096514
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Gillespie, Alison
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  38
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  92101
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/450,562
;      FILING DATE:
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/404,950
;      FILING DATE:  13-MAR-1995
;      APPLICATION NUMBER:  08/336,257
;      FILING DATE:  7-NOV-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/314,083
;      FILING DATE:  28-SEPT-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/311,363
;      FILING DATE:  23-SEPT-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/290,012
;      FILING DATE:  11-AUG-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  4-APR-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/193,078
;      FILING DATE:  07-FEB-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/149,097
;      FILING DATE:  5-NOV-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/105,536
;      FILING DATE:  11-AUG-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/914,231
;      FILING DATE:  13-JULY-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  10-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US92/06903
;      FILING DATE:  14-AUG-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/620,250
;      FILING DATE:  30-NOV-1990
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;      APPLICATION NUMBER:  07/603,751
;      FILING DATE:  08-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/482,384
;      FILING DATE:  02-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  6362-519812
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 238-0999
;      TELEFAX:  (619) 238-0062
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3600 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
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;    FEATURE:
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US-08-450-562-11


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seq_documentation_block:
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; Patent No. 6040436
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
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;      TOPOLOGY:  linear
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;      NAME/KEY:  CDS
;      LOCATION:  20..3292
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; Patent No. 6140485
;  GENERAL INFORMATION:
;    APPLICANT:  Franco, Rodrigo
;    APPLICANT:  Sun Chen, Ai Ru
;    APPLICANT:  Suey, David J.
;    TITLE OF INVENTION:  NUCLEIC ACID ENCODING HUMAN NEURONAL
;    TITLE OF INVENTION:  CALCIUM CHANNEL SUBUNITS
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hamilton, Brook, Smith & Reynolds, P.C.
;      STREET:  Two Militia Drive
;      CITY:  Lexington
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02173-4799
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/452,007
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/713,118
;      FILING DATE:  16-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mata, Elizabeth W.
;      REGISTRATION NUMBER:  38,236
;      REFERENCE/DOCKET NUMBER:  ACC96-01
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-861-6240
;      TELEFAX:  617-861-9540
;  INFORMATION FOR SEQ ID NO:  3:
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US-09-452-007-3


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seq_documentation_block:
; Sequence 20, Application US/08455543A
; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
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;       CITY:  San Diego
;       STATE:  California
;       COUNTRY:  USA
;       ZIP:  92101-2926
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  DOS
;       SOFTWARE:  FastSEQ Version 1.5
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/455,543A
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/223,305
;       FILING DATE:  April 4, 1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/868,354
;       FILING DATE:  April 10, 1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/745,206
;       FILING DATE:  15-AUG-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/620,250
;       FILING DATE:  30-NOV-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/482,384
;       FILING DATE:  20-FEB-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/603,751
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US89/01408
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/176,899
;       FILING DATE:  04-APR-1988
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  6362-52517
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  20:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  3657 base pairs
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seq_documentation_block:
; Sequence 20, Application US/08223305C
; Patent No. 5851824
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/223,305C
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/US89/01408
;      FILING DATE:  04-APR-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/176,899
;      FILING DATE:  04-APR-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L.
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  52516  (P519739)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619)238-0999
;      TELEFAX:  (619)238-0062
;  INFORMATION FOR SEQ ID NO:  20:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  3657 base pairs
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;    MOLECULE TYPE:  Genomic DNA
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;    ORIGINAL SOURCE:
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;      LOCATION:  35...3364
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US-08-223-305C-20


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; Patent No. 5792846
;  GENERAL INFORMATION:
;    APPLICANT:  Harpold, Michael
;    APPLICANT:  Ellis, Steven
;    APPLICANT:  Williams, Mark
;    APPLICANT:  Feldman, Daniel
;    APPLICANT:  McCue, Ann
;    APPLICANT:  Brenner, Robert
;    TITLE OF INVENTION:  HUMAN CALCIUM CHANNEL COMPOSITIONS AND
;    TITLE OF INVENTION:  METHODS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Brown, Martin, Haller & McClain
;      STREET:  1660 Union Street
;      CITY:  San Diego
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92101-2926
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/455,543A
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/223,305
;      FILING DATE:  April 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/868,354
;      FILING DATE:  April 10, 1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/745,206
;      FILING DATE:  15-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/620,250
;      FILING DATE:  30-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/482,384
;      FILING DATE:  20-FEB-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,751
;      FILING DATE:  04-APR-1989
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;       APPLICATION NUMBER:  WO PCT/US89/01408
;       FILING DATE:  04-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/176,899
;       FILING DATE:  04-APR-1988
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Seidman, Stephanie L.
;       REGISTRATION NUMBER:  33,779
;       REFERENCE/DOCKET NUMBER:  6362-52517
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (619)238-0999
;       TELEFAX:  (619)238-0062
;   INFORMATION FOR SEQ ID NO:  34:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  3585 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  double
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA (genomic)
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  35..3295
;       OTHER INFORMATION:  /standard_name= "Alpha-2c"
;     FEATURE:
;       NAME/KEY:  5'UTR
;       LOCATION:  1..34
;     FEATURE:
;       NAME/KEY:  3'UTR
;       LOCATION:  3296..3585
US-08-455-543A-34


alignment_scores:
            Quality: 5403.50              Length:   1036
              Ratio:  5.241                Gaps:      1
 Percent Similarity:  99.517   Percent Identity: 99.517

alignment_block:
 US-09-397-548-16 x US-08-455-543A-34   ..

 Align seg 1/1  to: US-08-455-543A-34  from: 1  to: 3585

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      17 uLeuIleGlyProSerSerGluGluProPheProSerAlaValThrIleL 34
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